Atty. Dkt. No.: PAT051746-US-PCT

2300-51746

I. AMENDMENT

Amendments to the Claims:

- 1. (Currently amended) A <u>liquid</u> combination vaccine comprising antigens for protecting a subject against at least diphtheria ('D'), tetanus ('T'), pertussis ('P') and *Haemophilus influenzae* type b ('Hib'), wherein: (a) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (b) the concentration of the Hib conjugate in the vaccine is <15 μg/ml; and (c) the Hib conjugate has never been lyophilised the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (e) the vaccine does not contain an aluminium hydroxide adjuvant; and (f) the vaccine does not contain an aluminium potassium sulphate adjuvant.
- 2. (Currently amended) A vial having a piercable seal and containing a <u>liquid</u> combination vaccine, which combination vaccine comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'), wherein the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide, and wherein: (a) the concentration of the Hib conjugate in the vaccine is <15 μg/ml, and (b) the vial's piercable seal has not been pierced; (c) the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (e) the vaccine does not contain an aluminium photassium sulphate adjuvant; and (f) the vaccine does not contain an aluminium potassium sulphate adjuvant.
- 3. (Currently amended) A hermetically-sealed container containing a <u>liquid</u> combination vaccine comprising antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'), wherein (a) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (b), and wherein the concentration of the Hib conjugate in the vaccine is <15 μg/ml; (c) the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (e) the vaccine does not contain an

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aluminium hydroxide adjuvant; and (f) the vaccine does not contain an aluminium potassium sulphate adjuvant.

4. (Currently amended) A process for preparing a <u>liquid</u> combination vaccine comprising antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'), wherein (a) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (b), and the concentration of Hib conjugate in the vaccine is <15 μg/ml; (c) the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (e) the vaccine does not contain an aluminium hydroxide adjuvant; and (f) the vaccine does not contain an aluminium sulphate adjuvant,

characterised in that the process does not include one or both of the following steps: (i) a step of lyophilisation of the Hib conjugate antigen; (ii) a step of packaging the diphtheria, tetanus and pertussis antigens in admixed form separately from the Hib conjugate antigen.

- 5. (Currently amended) A process for inserting a <u>liquid</u> combination vaccine into a container, wherein: (a) the vaccine that comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'); (b) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; and (c) the concentration of the Hib conjugate in the vaccine is <15 μg/ml; (d) the vaccine comprises an aluminium phosphate adjuvant; (e) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (f) the vaccine does not contain an aluminium hydroxide adjuvant; and (g) the vaccine does not contain an aluminium potassium sulphate adjuvant.
- 6. (Currently amended) A process for attaching a label to a container, wherein:
 (a) the container contains a <u>liquid</u> combination vaccine that comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'); (b) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; and (c) the concentration of the Hib conjugate in the vaccine is <15 μg/ml;

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(d) the vaccine comprises an aluminium phosphate adjuvant; (e) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (f) the vaccine does not contain an aluminium hydroxide adjuvant; and (g) the vaccine does not contain an aluminium potassium sulphate adjuvant; and (h) the process comprises a step of attaching a label to a container.

7. (Currently amended) A process for inserting a combination <u>liquid</u> vaccine into a container and then extracting the vaccine from the container, wherein: (a) the vaccine comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'); (b) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; and (c) the concentration of the Hib conjugate in the vaccine is <15 μg/ml; (d) the vaccine comprises an aluminium phosphate adjuvant; (e) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (f) the vaccine does not contain an aluminium hydroxide adjuvant; and (g) the vaccine does not contain an aluminium sulphate adjuvant.

8-10. (Canceled)

- 11. (Original) The vaccine, vial, container or process of any preceding claim, where the diphtheria antigen comprises a diphtheria toxoid, the tetanus antigen comprises a tetanus toxoid, and the pertussis antigen comprises a cellular pertussis component.
- 12. (Original) The vaccine, vial, container or process of any preceding claim, where the conjugate comprises a CRM₁₉₇ carrier, a tetanus toxoid carrier or an outer membrane complex of *N. meningitidis* carrier.
- 13. (Original) The vaccine, vial, container or process of any preceding claim, where the conjugate comprises an oligosaccharide fragment of the Hib polyribosylribitol phosphate.

14. (Canceled)

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15. (Canceled)

- 16. (Withdrawn) A method for raising an antibody response in a mammal, comprising administering the vaccine of any preceding claim to the mammal.
- 17. (New) The vaccine, vial, container or process of any preceding claim, wherein at most 5% of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate.
- 18. (New) The vaccine of claim 17, wherein at most 1% of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate.
- 19. (New) The vaccine of claim 11, wherein the diphtheria toxoid and the tetanus toxoid are adsorbed onto aluminium phosphate.
- 20. (New) The vaccine, vial, container or process of any preceding claim, wherein the conjugate has a saccharide:protein ratio (w/w) of between 1:5 and 5:1.
- 21. (Withdrawn -- New) The method of claim 16, wherein administration of the vaccine results in an anti-PRP antibody concentration of ≥0.15 μg/ml.